Project Baseline Summary Report

Data Source: **EM CDB**

Report Number: **GEN-01b**

Operations/Field Office: **Savannah River**

Print Date: **3/9/2000**

Site Summary Level: **Savannah River Site**

HQ ID: **0519**

Project **SR-FA22 / RBOF Monitoring Project**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Definition of Scope: Deactivation surveillance and maintenance activities include the base activities required to monitor and maintain the safety envelope of RBOF for the protection of Site personnel, the public, and the environment. These activities include:

· Operation and management of the facilities with a standard of care consistent with the hazard classification of the facility, and implementation of the guidelines of DOE Order 5480.19;
· Surveillance of facility infrastructure through routine facility rounds to guard against building deterioration;
· Operation and maintenance of systems required to monitor and control residual contamination and to alert personnel of hazards;
· Control of access to hazards (high energy, radiation, chemicals, etc.);
· Performance of environmental monitoring to ensure integrity of S&M plan;
· Personnel training and qualifications for all required processes, systems, and functions are maintained in support of the facility S&M plan;
· Low Level and other waste processing, characterization, packaging, and shipment to maintain current facility status;
· Maintenance and improvements necessary to maintain compliance with established standards of operation;
· Maintenance of a work control system as required by DOE Order 4330.B;
· Providing a method of safe entry into the facilities;
· Maintenance of facilities to ensure structural integrity;
· Oversight and maintenance of essential facility support services systems;
· Work package and maintenance procedures development;
· Field procurement and spare parts management, on an as needed basis;
· Execution of limited scope stabilization and deactivation activities to prevent the spread of contamination or the release of any residual materials;
· Performance of drills, maintenance of emergency response plans for affected facilities, and maintenance of associated emergency response equipment.

During the deactivation period, some elements of pre-deactivation surveillance and maintenance may become unnecessary due to execution of limited scope mitigation activities that reduce or eliminate associated risks. As these may vary from facility to facility, pre-deactivation and deactivation period surveillance and maintenance scope and costs are assumed, for the purposes of this plan, to be the same. Post-deactivation scope and costs will be substantially reduced, although the specifics will again vary from facility to facility based on as yet undefined facility deactivation end states.

Technical Approach: Surveillance and maintenance of RBOF requires no new technologies or capabilities that are not already available at SRS.

Project Status in FY 2006:

Site funding limitations currently preclude funding for the full deactivation projects that would be needed to significantly reduce RBOF surveillance and maintenance costs. Current funding guidance indicates that the large scale deactivation scope outlined in a separate PBS will begin after FY2006. Until such time, RBOF will be maintained at a higher level of surveillance and maintenance costs commensurate with the risk posed by the facility.

This does not preclude, however, the planning and implementation of smaller scale disposition actions. These actions would be initiated under this

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ACP project to reduce a specific risk, thereby lowering surveillance and maintenance costs associated with that particular risk. In some cases, excess site assets may be used to fund disposition actions. These excess assets may be used in a barter arrangement with a subcontractor in exchange for the demolition and removal of excess facilities (known as an "assets for services" subcontract). Any proceeds from this type of activity may be used to fund additional disposition activities at SRS. Other funding for disposition projects would be incremental to the surveillance and maintenance budget. As funding for these small scale disposition actions is speculative, no consideration is given to them in this PBS.

Post-2006 Project Scope:

The post-FY06 work scope is a continuation of pre-deactivation surveillance and maintenance until such time as deactivation is completed. Current funding guidance indicates that these deactivation activities will begin after FY2006. Deactivation is expected to be complete by FY2011. At such time, a routine of quarterly facility entries will be established. These entries will verify the structural integrity of the facility, and verify the operational integrity of any remote monitoring equipment, sump pumping equipment, and environmental monitoring equipment required by the RBOF surveillance and maintenance plan. This quarterly monitoring will continue until final disposition of the facility.

Project End State

This project only provides for surveillance and maintenance during the deactivation and post-deactivation phases of the RBOF life cycle (i.e., this project end state). Additional projects will be required to meet the EM site end state. Contamination in the area is expected to be eliminated or fixed with a surface sealant. At this time, a final end state for the area has not been defined. RBOF has not been considered for reuse in the past, nor have plans have been made at this time to reuse any of the facilities after area deactivation (post-FY2011).

No nuclear materials, spent fuel, or high level waste will be stored in RBOF following deinventory, nor will any be generated by this project. Wastes generated by this project will be primarily job control wastes from incidental decontamination, surveillance, and maintenance activities. Such wastes would be disposed of as low level waste.

Cost Baseline Comments:

Costs identified in this PBS are rough order of magnitude engineering estimates only. Some pre-deactivation surveillance and maintenance costs are based on historical data. Post-deactivation surveillance and maintenance costs are dependent on the deactivation end points, which in turn depend on the characterization of facility hazards. No facility characterization or end points determination has been made for RBOF. Completion of these activities will likely alter the post-deactivation surveillance and maintenance cost and scope estimates contained in this ACP project.

Safety & Health Hazards:

The Receiving Basin for Offsite Fuels (RBOF) was originally built to store spent DOE owned fuel from foreign and domestic research reactors. Its mission continues as DOE returns research reactor fuel from the United States and overseas to its control. This mission is expected to continue until FY2007, by which time the basin would be completely deinventoried. This project covers deactivation and post-deactivation surveillance and maintenance for RBOF. Post-deactivation surveillance and maintenance activities will commence by FY2012.

The criteria for determining the radiological hazard categories are provided in DOE-STD-1027-92, and the criteria for determining the chemical hazard categorization are provided in WSRC-MS-92-206. Determination of the above hazards are described in WSRC-TR-94-0287, Rev. 1, "Basis for

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Project Description Narratives

Interim Operations (BIO) for the Receiving Basin for Offsite Fuels Facility and Resin Regeneration Facility". Chemical inventories will be controlled in accordance with procedure FDP 14.1, "Chemical Management Program".

Safety & Health Work Performance:

Feedback and continuous improvement is a major part of the of the Integrated Safety Program as discussed in D.1.3 Control. The WSRC Assessment Manual describes the primary mechanism for feedback. The Assessment Manual describes the mechanisms for collecting feedback information; identifying improvement opportunities; making changes to improve; and conducting oversight. The WSRC feedback mechanism is two tiered, consisting of Self-Assessment and Management Assessment elements. Additional feedback is collected through the Site Item Reportability and Issue Management Manual, the Lessons Learned Program and other project programs and resources of information.

PBS Comments:

None.

Baseline Validation Narrative:

Not Applicable.

General PBS Information

Project Validated?

Date Validated:

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/3/1999

FEDPLAN Project? Yes

Drivers:

CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
Y	Y	N	N	N	Y	Y	Y

Project Identification Information

DOE Project Manager: S. L. Johnson

DOE Project Manager Phone Number: 803-557-3828

DOE Project Manager Fax Number: 803-557-3669

DOE Project Manager e-mail address: sandra-l.johnson@srs.gov

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General PBS Information

Is this a High Visibility Project (Y/N):

Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	0	234,030	234,030						0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	0	78,057	78,057						0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	0	234,030	234,030						0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	0	78,057	78,057						0	0	0	0	0	0	0

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	4,177	4,290	4,407	4,526	10,895	8,806	10,061	11,495	13,133	15,004	17,142	19,584	22,375	25,563	29,205	33,367
PBS Baseline (constant 1999 dollars)	3,317	3,317	3,318	3,318	7,378	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219
PBS EM Baseline (current year dollars)	4,177	4,290	4,407	4,526	10,895	8,806	10,061	11,495	13,133	15,004	17,142	19,584	22,375	25,563	29,205	33,367
PBS EM Baseline (constant 1999 dollars)	3,317	3,317	3,318	3,318	7,378	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219	5,219

Baseline Escalation Rates

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1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
			3.60%	3.60%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2070

Current Projected End Date of Project: 9/1/2070

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	76,014	**Actual 1997 Cost:**	**Actual 1998 Cost:**
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	76,014	**Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):**	2,052
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	78,066		

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):		
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	78,066	

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Project Reconciliation

Additional Amount to Reconcile (+): -9

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): **78,057**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Project Mission Complete	SR-FA22-002		9/1/2070								
Project Start	SR-FA22-001		10/1/2007								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Project Mission Complete	SR-FA22-002				Y						
Project Start	SR-FA22-001			Y							

Technology Needs

Site Need Code: SR99-4014

Site Need Name: Basin Cleanup Technology

Focus Area Work Package ID: DD-10 **Focus Area Work Package:** Production Reactor D&D

Focus Area: DDFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Membrane-Supported Particle-Bound Ligands for Cesium Removal		
Specialized Separation Utilizing 3M Membrane Technology		

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Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	01915: -	Y	N
	00540: LAL - Special Case Waste	Y	N
	00528: LAE - Incinerable Low Activity Job Control Waste	Y	N